

Document Name: **SUBCUTANEOUS IMMUNOGLOBULIN (SCIG) – ADMINISTRATION**

Restrictions:

### Description

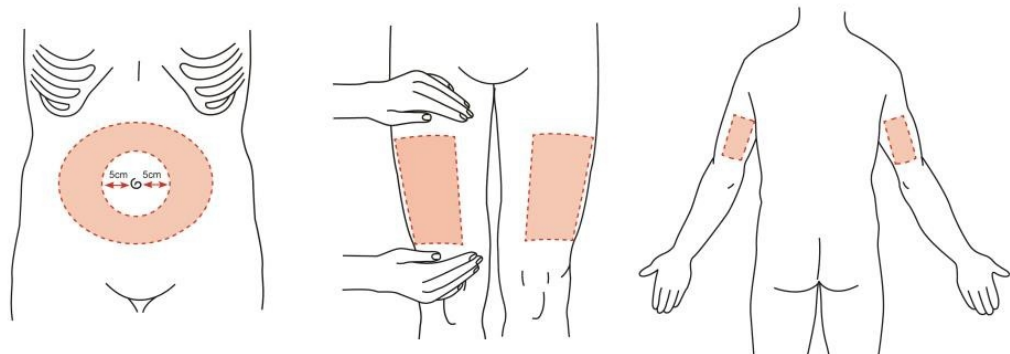
What are immunoglobulins

- Immunoglobulins are antibodies that are found in blood.
- Produced by the body's immune system to fight infections caused by bacteria and viruses.
- If the patient is low in these immunoglobulins they may not be able to fight infection.
- SCIG is an immunoglobulin therapy that is used to increase and correct low levels of immunoglobulins in the blood.
- By injecting SCIG products at regular weekly intervals the patient's immunoglobulin levels should remain stable and infection rates should be reduced

### Infusion pumps

- SCIG infusions can be easily performed in the home setting. The patients can use a pump device or manually deliver the infusion via a slow push. The latter is likely to more effective after several months use of the pump.
- The most cost-effective pump is the EMED SCIG 60 infuser, which is a non-electronic TGA-registered pump that is sturdy, robust and accurate without the need for yearly calibration.
- The pump is used with a SAF-Q needle and a initially Versa-rate flow plus control tubing to deliver the infusion at an appropriate rate (start at open and use control dial to slow rate if not tolerated).
- The EMED pump should be cleaned according to work cleaning instructions for the SCIG 60 infuser.

### Infusion sites



SCIG may be administered at a number of possible sites according to patient preference. Usually the lower abdomen will be used. Ensure selected site is at least 5cms from umbilicus "belly button". The outer edge of the thigh or back of the upper arm can also be used. The shaded areas can be used for insertion of the needle.

NB: Rotation of infusion sites is not recommended. Using the same site for infusion can help to reduce the amount of swelling and redness that may occur post infusion. Avoid areas of rash, bruising, irritation.

RISK RANKING High

**Infusion process:****In the health service****Prior to commencing the infusion check:**

- SCIg has been prescribed
- The correct SCIg presentation has been issued (check that the dose for administration matches the dose authorised and matches the authorised product)
- **SCIg has reached room temperature prior to infusion**
- The correct corresponding technique for the patient has been identified (manual push or via infusion device/pump). The choice of administration technique and equipment is at the discretion of the treating healthcare professional and the patient, based on availability of devices and personal preference.
- Baseline observations have been taken and recorded
- Any pre-infusion symptom which may be confused with an adverse reaction has been noted.

**Checking the infusion:**

- Check patient identity as per **PATIENT AND PROCEDURAL SITE IDENTIFICATION and MEDICATION Administration**
- Check you have the right rate of infusion. Different SCIg products are given according to different infusion schedules and patient clinical need.
- **Infusion: subcutaneous**
- **Please be aware that infusion volumes vary between products /presentations** (see Table 1 **SUBCUTANEOUS IMMUNOGLOBULIN (SCIg)- patient selection and management**)
- Products/preparations are not interchangeable
- Administration techniques and equipment – may be via manual push infusion device/pump refer. **SCIg- Doing your own Subcutaneous Immunoglobulin (SCIg) Infusion**
- Infusion site selection – most common is lower abdomen - ensure site is at least 5cms from umbilicus
- Site rotation is **not** recommended - using the same site for infusion can help to reduce the amount of swelling and redness that can occur post infusion

**Rate calculations**

The infusion rate is dependent also on the equipment being used. If using EMED pump and lines/ needles you can use the EMED calculator to work out the mL/hr per site and the expected length of time for the infusion. **SCIg EMED Versarate Plus flow calculator** <https://www.versarate.com/calculator>

**Observations**

Perform and document the patient's temperature, pulse, respiration rate and blood pressure at the following points as a minimum:

- prior to commencing
- on completion
- observe patient for 20 minutes post completion.

If a patient experiences an adverse reaction to SCIg infusion more frequent observations may be required.

**Adverse effects**

Adverse effects tend to most commonly be infusion site related. Table 2 and 3 outline possible effects and management. Consideration should be given to patients who receive SCIG:

- for the first time
- when there has been a long interval since the previous infusion (8 weeks).

**Table 2: Possible side effects**



Very Common	Common	Rare
<ul style="list-style-type: none"> <li>• Infusion site related</li> <li>• Fever</li> <li>• Nausea</li> <li>• Vomiting</li> <li>• Diarrhoea</li> </ul>	<ul style="list-style-type: none"> <li>• Chills</li> <li>• Back pain</li> <li>• Arthralgia</li> <li>• Hypotension</li> </ul>	<ul style="list-style-type: none"> <li>• Allergic reactions</li> <li>• Anaphylactic shock</li> <li>• Thrombotic reactions</li> <li>• Urticaria</li> </ul>

**Table 3: Adverse effect management at home by patient or carer**

(Ensure to record all adverse effects in patient diary)

Reaction	Action 1	Action 2
<b>Mild</b> (common skin reaction) Large swelling and redness at insertion site	Apply cold pack to the area	Take paracetamol or antihistamine if instructed/ordered. Swelling should resolve over next 24-48hrs
<b>Moderate</b> Headache, flushing, nausea, shivering, itching, muscle aches, anxiety, dizziness, irritability	<b>STOP</b> infusion for 30 minutes	Restart when symptoms have gone, Take paracetamol / antihistamine if instructed /ordered
<b>Severe</b> Chest pain, wheezing severe itching or any mild or moderate symptoms as above become worse	<b>STOP infusion</b> <b>Call 000 to get urgent medical help</b> Patient to Lie or sit down as comfortable	Tell your doctor or nurse specialist as soon as able.

**Troubleshooting Site reactions**

 <p><b>Mild</b></p>	 <p><b>Moderate</b></p>
<b>Injection site reactions</b> <ul style="list-style-type: none"> <li>- Blanching</li> <li>- Redness/Rash</li> <li>- Itching</li> <li>- Discomfort</li> <li>- Swelling</li> </ul>	Assess for tape allergy – change to paper/ hypoallergenic tape Assess needle size- choose needle that is consistent with volume to be infused Assess length of needle – may be too short and infusing into the intradermal layer Assess site location – may be too close to muscle layer Decrease rate of infusion or volume per site Avoid tracking of Ig through the intradermal layer check needle tip is dry prior to insertion Consider appropriateness of rotating infusion site Consider use of topical anaesthetic cream

<b>Leaking at insertion site</b>	<p>Assess needle - ensure fully inserted and fixed securely</p> <p>Assess placement – is it in area of movement, consider alternative site</p> <p>Assess length of needle – may be too short, change to longer needle</p> <p>Assess infusion volume – decrease amount per site</p> <p>Assess rate of infusion – slowing rate may help</p>
<b>Extreme discomfort with needle</b>	<p>Assess needle length ensure no too long and irritating abdominal wall</p> <p>Assess needle is being inserted “dry” to prevent tracking through intradermal layer</p> <p>Consider using needless indwelling subcutaneous catheter device</p> <p>Consider using ice or topical anaesthetic cream prior to insertion</p>
<b>Long infusion time</b>	<p>Ensure SCIG ready to use at room temperature</p> <p>Assess volume per site, rate of infusion, number of sites or adjust infusion regime</p> <p>Check equipment for clamps/kinks, correct selection of needle size, tubing. If using a pump check function, battery not low.</p>
<b>Blood return observed</b>	<p>Remove and discard needle with blood return and reinsert with new insertion needle and site</p>

**Troubleshooting further info**     <https://www.slideshare.net/DallasAllergyImmunology/immunoglobulin-replacement-therapy>

**Adverse effect reporting**

Adverse effects should be reported using Riskman and following SWH **ADVERSE DRUG REACTION** and also reported to both the supplier and the Blood Service.

Supplier adverse event forms are available directly from the supplier or contact the Blood Service transfusion nurses (TN) who will forward a copy. Blood Service TN email: vtatn@redcrossblood.org.au CSL Behring email: [adverse.events.global@cslbehring.com](mailto:adverse.events.global@cslbehring.com)

Where a change of product is required, this is done via BloodSTAR using a dose change request / initial authorisation request by the treating Medical Officer. There is also the option of creating an alert on Blood STAR to prevent dispensing of the offending product. The alert can be added by the treating Medical Officer

**At home**     Patients are enrolled in an at home program refer **SUBCUTANEOUS IMMUNOGLOBULIN (SCIG)- patient selection and management**

**Key aligned documents**

[CUVITRU atHOME Supporting your experience booklet](#)  
[CUVITRU PSP Patient enrolment and consent form INTERACTIVE](#)  
**MEDICATION Administration**  
**SCIG - CSL Cares Nurse Care Patient Enrolment form**  
**SCIG- Doing your own Subcutaneous Immunoglobulin (SCIG) Infusion**  
**SUBCUTANEOUS IMMUNOGLOBULIN (SCIG)- patient selection and management**

**Legislation, standards & best practice**

**POISONS CONTROL PLAN (PCP)**

**References**

- [https://www.transfusion.com.au/blood\\_products/fractionated\\_plasma/SCIg](https://www.transfusion.com.au/blood_products/fractionated_plasma/SCIg)
- <https://www.cslbehring.com.au/-/media/cslb-australia/documents/aus-pis-and-cmis/evogam-au-pi-800.pdf?la=en-us&hash=2FECE8E47F85B328F10996442028EC8F31F833DD> Evogam®
- <https://www.cslbehring.com.au/-/media/cslb-australia/documents/aus-pis-and-cmis/hizentra-au-product-information-800.pdf?la=en-us&hash=852F1A8C1BA08F755B6BE1FE7209193EF0489F40> Hizentra®
- [https://www.allergy.org.au/images/stories/pospapers/ASCIA\\_HP\\_Clinical\\_Update\\_P\\_ID\\_2017.pdf](https://www.allergy.org.au/images/stories/pospapers/ASCIA_HP_Clinical_Update_P_ID_2017.pdf)
- <https://www.nps.org.au/medicine-finder/cuvitru>
- SCIg EMED Versarate Plus flow calculator <https://www.versarate.com/calculator>

**Contributors**

	Name First initial. Surname	Position I.e. AUM Intensive care	Involved in			
			Development / review	Ratification	Implementation	Compliance
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<b>Committee/s:</b>	Medication management committee Clinical Governance committee			X		
<b>Consumer input</b>						
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**Implementation & communication**

Policy, procedure and pathways monthly memo  
Staff education and training program

**Compliance**

Riskman